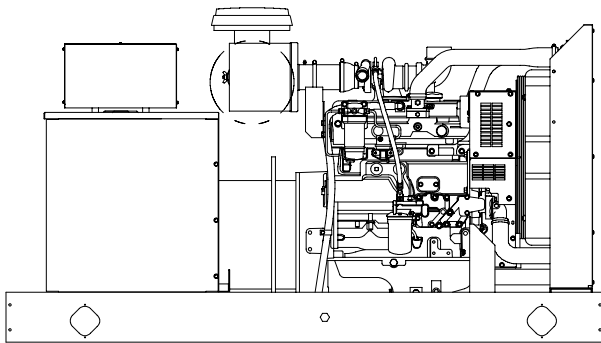




### Ratings Range

		<b>60 Hz</b>
<b>Standby:</b>	<b>kW</b>	80-100
	<b>kVA</b>	80-125
<b>Prime:</b>	<b>kW</b>	71-90
	<b>kVA</b>	71-113



### Generator Set Ratings

Alternator	Voltage	Ph	Hz	130° C Rise Standby Rating		105° C Rise Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
4S9W/ 4S9	120/208	3	60	100/125	347	88/110	305
	127/220	3	60	100/125	328	88/110	289
	120/240	3	60	100/125	301	88/110	265
	120/240	1	60	80/80	333	71/71	296
	139/240	3	60	100/125	301	90/113	271
	220/380	3	60	88/110	167	82/103	156
	277/480	3	60	100/125	150	90/113	135
347/600	3	60	100/125	120	90/113	108	
4S11W/ 4S11	120/208	3	60	100/125	347	90/113	312
	127/220	3	60	100/125	328	90/113	295
	120/240	3	60	100/125	301	90/113	271
	120/240	1	60	94/94	392	84/84	350
	139/240	3	60	100/125	301	90/113	271
	220/380	3	60	100/125	190	90/113	171
	277/480	3	60	100/125	150	90/113	135
347/600	3	60	100/125	120	90/113	108	
4V11W/4V11	120/240	1	60	94/94	392	84/84	350

### Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set complies with ISO 8528-5, Class G2, requirements for transient performance in all generator set configurations. Select the Decision-Maker™ 550 controller for improved voltage regulation and ISO 8528-5, Class G3, compliance.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator features:
  - The unique Fast-Response™ II excitation system delivers excellent voltage response and short circuit capability using a permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Controllers are available for all applications. See controller features inside.
  - The low coolant level shutdown prevents overheating (standard on radiator models only).
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

**RATINGS:** All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. *Standby Ratings:* Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. *Prime Power Ratings:* Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. **GENERAL GUIDELINES FOR DERATINGS:** *Altitude:* Derate 1.3% per 100 m (328 ft.) elevation above 2400 m (7870 ft.). *Temperature:* Derate 1.0% per 10°C (18°F) temperature above 25°C (77°F).

# Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Leads: quantity, type	12, Reconnectable
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	
Permanent magnet (PM) alternator	±2% Average
550 controller (with 0.5% drift due to temperature variation)	3-Phase Sensing, ±0.25%
Unbalanced load capability	100% of Rated Standby Current
One-step load acceptance	100% of Rating
Peak motor starting kVA:	(35% dip for voltages below)
480 V    4S9W/4S9 (12 lead)	315
480 V    4S11W/4S11 (12 lead)	460

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and drip-proof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

## Application Data

### Engine

Engine Specifications	
Manufacturer	John Deere
Engine model	4045HF275
Engine type	4-Cycle, Turbocharged, Charge Air-Cooled
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	4.5 (276)
Bore and stroke, mm (in.)	106 x 127 (4.19 x 5.00)
Compression ratio	17.0:1
Piston speed, m/min. (ft./min.)	457 (1500)
Main bearings: quantity, type	5, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	117 (157)
Cylinder head material	Cast Iron
Crankshaft material	Forged Steel
Valve material:	
Intake	Chromium-Silicon Steel
Exhaust	Stainless Steel
Governor: type, make/model	JDEC Electronic, Stanadyne/DE10
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

### Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	24 (850)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	571 (1060)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)
Exhaust outlet size at engine hookup, mm (in.)	98 (3.86)

### Engine Electrical

Engine Electrical System (12/24 Volt*)	
Battery charging alternator:	12 Volt/24 Volt
Ground (negative/positive)	Negative
Volts (DC)	12/24
Ampere rating	65/45
Starter motor rated voltage (DC)	12/24
Battery, recommended cold cranking amps (CCA):	12 Volt/24 Volt
Quantity, CCA rating each	One, 640/Two, 570
Battery voltage (DC)	12

\*12-volt or 24-volt engine electrical systems are available.

# Application Data

## Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	11.0 (0.44)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, fuel pump: type, m (ft.)	Engine-Driven, 1.8 (6.0)
Max. fuel flow, Lph (gph)	41 (10.8)
Fuel prime pump	Manual
Fuel filter	
Secondary	2 Microns @ 98% Efficiency
Water Separator	Yes
Recommended fuel	#2 Diesel

## Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.)	14.7 (15.5)
Oil pan capacity with filter, L (qt.)	15.6 (16.5)
Oil filter: quantity, type	1, Cartridge
Oil cooler	Water-Cooled

## Cooling

Radiator System	
Ambient temperature, °C (°F)*	50 (122)
Engine jacket water capacity, L (gal.)	8.5 (2.25)
Radiator system capacity, including engine, L (gal.)	20.1 (5.3)
Engine jacket water flow, Lpm (gpm)	136 (36)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	58 (3270)
Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)	17 (990)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	600 (23.6)
Fan, kWm (HP)	8.0 (10.7)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.125 (0.5)

\* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

## Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)‡	181 (6400)
Combustion air, m <sup>3</sup> /min. (cfm)	8.8 (310)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	25.0 (1420)
Alternator, kW (Btu/min.)	11.6 (660)

‡ Air density = 1.20 kg/m<sup>3</sup> (0.075 lbm/ft<sup>3</sup>)

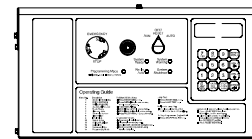
## Fuel Consumption

Diesel, Lph (gph) at % load	Standby Rating
100%	30.8 (8.1)
75%	23.9 (6.3)
50%	19.0 (5.0)
25%	12.3 (3.2)

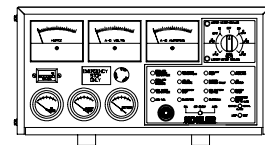
Diesel, Lph (gph) at % load	Prime Rating
100%	27.2 (7.2)
75%	21.5 (5.7)
50%	15.5 (4.1)
25%	9.4 (2.5)

## Controllers



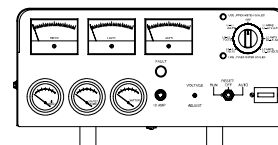
### Decision-Maker™ 550 Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Programmable microprocessor logic and digital display features. Alternator safeguard circuit protection. 12- or 24-volt engine electrical system capability. Remote start, remote annunciation, and remote communication options. Refer to G6-46 for additional controller features and accessories.



### Decision-Maker™ 3+, 16-Light Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Microprocessor logic, AC meters, and engine gauge features. 12- or 24-volt engine electrical system capability. Remote start, prime power, and remote annunciation options. Refer to G6-30 for additional controller features and accessories.



### Decision-Maker™ 1 Controller

Single-light annunciation and basic controls with NFPA capability. Relay logic, AC meters, and engine gauge features. 12-volt engine electrical system capability only. Remote or automatic start options. Refer to G6-29 for additional controller features and accessories. **Note:** Not available with 600-volt alternator.

## Additional Standard Features

- Alternator Protection (standard with 550 controller)
- Battery Rack and Cables
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature

## Available Accessories

### Enclosed Unit

- Sound Enclosure (with enclosed critical silencer)
- Weather Enclosure (with enclosed critical silencer)
- Weather Housing (with roof-mounted critical silencer)

### Open Unit

- Exhaust Silencer, Critical (kit: PA-324470)
- Exhaust Silencer, Hospital (kit: GM32386-KP1)
- Flexible Exhaust Connector, Stainless Steel

### Cooling System

- Block Heater (recommended for ambient temperatures below 0°C [32°F])
- Radiator Duct Flange

### Fuel System

- Auxiliary Fuel Pump
- Flexible Fuel Lines
- Fuel Pressure Gauge
- Subbase Fuel Tanks
- Subbase Fuel Tank with Day Tank

### Electrical System

- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater

### Engine and Alternator

- Air Cleaner, Heavy Duty
- Air Cleaner Restriction Indicator
- Alternator Strip Heater
- Bus Bar Kits
- Closed Crankcase Canister
- CSA Certification
- Current Transformer Kit
- Line Circuit Breaker (NEMA type 1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)
- Optional Alternators
- Rated Power Factor Testing
- Rodent Guards
- Safeguard Breaker (not available with 550 controller)
- Skid End Caps
- Voltage Regulation, 1%
- Voltage Regulator Sensing, 3-Phase

### Paralleling System

- Reactive Droop Compensator
- Voltage Adjust Control
- Voltage Regulator Relocation Kit

### Maintenance

- General Maintenance Literature Kit
- Maintenance Kit (includes standard air, oil, and fuel filters)
- NFPA 110 Literature
- Overhaul Literature Kit
- Production Literature Kit

### Controller (550 and 16-Light)

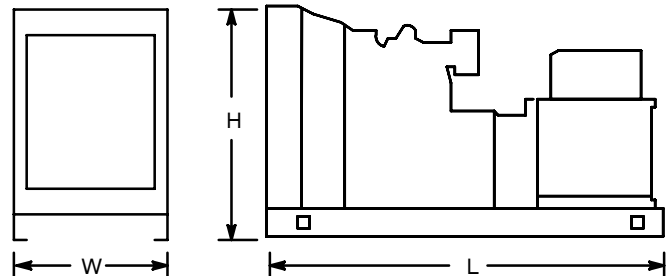
- Common Failure Relay Kit
- Communication Products and PC Software (550 controller only)
- Customer Connection Kit
- Dry Contact Kit (isolated alarm)
- Engine Prealarm Sender Kit
- Prime Power Switch (550 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel
- Remote Emergency Stop Kit
- Remote Mounting Cable
- Run Relay Kit

### Miscellaneous Accessories

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## Dimensions and Weights

Overall Size, L x W x H, mm (in.):  
 Wide Skid: 2400 x 1040 x 1274 (94.49 x 40.94 x 50.15)  
 Narrow Skid: 2400 x 864 x 1274 (94.49 x 34.02 x 50.15)  
 Weight (radiator model), wet, kg (lb.): 1234 (2720)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

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